

Product datasheet for **MR209829**

Btk (NM_013482) Mouse Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Btk (NM_013482) Mouse Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Btk
Synonyms:	A1528679; xid
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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**ORF Nucleotide
Sequence:**

>MR209829 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGCTGCAGTGATACTGGAGAGCATCTTTCTGAAGCGCTCCAGCAGAAAAAGAAAACATCACCTTTAA
 ACTTCAAGAAGCGCCTGTTTCTCTTGACTGTACACAACTTTCATACTATGAATATGACTTTGAAGTGG
 GAGAAGAGGCAGTAAGAAAGTTCAATAGATGTTGAGAAGATCACCTGTGTTGAAACAGTAATTCCTGAA
 AAAATCCCCACCAGAAAGACAGATTCGAGGAGAGGTGAGGAGTCTAGTGAATGGAACAGATTTCAA
 TCATTGAAAGTTCCCGTACCCATTCCAGGTTGTATATGATGAAGGACCTCTCTATGTTTTCTCCCCAAC
 TGAAGAGCTGAGAAAGCGCTGGATTACCAGCTCAAAAATGTAATCCGGTGAATAGTGACCTGGTACAG
 AAATACCATCCTTGCTTCTGGATTGATGGACAGTATCTCTGCTGCTCAGACAGCCAAGAATGCTATGG
 GCTGCCAAATTTGGAGAACAGGAATGGAAGCTTAAAACCTGGGAGTTCTCATCGAAAAACGAAAAAGCC
 TCTTCCCCTACCCAGAGGAAGATCAGATCTTGA AAAAACCGCTTCCCCGGAGCCAACAGCAGCACCA
 ATCTCCACAACCGAGCTGAAAAAGTCTGGCCCTTTATGATTACATGCCAATGAACGCAATGACTTAC
 AATTGCGAAAGGGCGAGGAGTATTTTATCCTGGAGGAGCAACCTACCGTGGTGCCGAGCAGAGATAA
 AAATGGGCAGGAAGGCTACATCCCAAGTAACTATCACTGAAGCTGAGGACTCCATAGAGATGTATGAG
 TGGTATTTCAAGCACATGACTCGAAGTCAAGCTGAGCAACTGCTAAAGCAAGAGGGGAAAGAAGGAGTT
 TCATTGTCGGAGACTCCAGCAAAGCTGGAAAATACACCGTGTCTGTGTTTGCTAAATCTACTGGGGAGCC
 TCAAGGGTGATCCGCCATTACGTTGTGTGTTCCACGCCACAGAGCCAGTATTACCTGGCTGAGAAACAC
 CTCTTCAGCACCATCCCTGAGCTCATTAACTACCATCAACACAACCTCTGCAGGCCTCATATCCAGGCTGA
 AATATCCTGTGTCTAAACAAAAACAAAAACGCGCCTTCTACTGCAGGCCTGGGCTATGGATCATGGGAAAT
 TGATCCAAAGGACCTCACCTTCTTGAAGGAGCTTGGGACTGGACAATTCCGGTGTGCTGAAATATGGGAAG
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 AAGAAGCCAAAGTCATGATGAATCTTTCCCATGAGAAGCTGGTGCAGTTGTATGGCGTCTGCACCAAACA
 ACGCCCCATCTTCATCATCACCGAGTACATGGCTAATGGCTGCCTCTTGAACCTGAGGGAGATGCGG
 CACCGCTTCCAGACACAGCAGCTGCTTGAGATGTGCAAAGATGTCTGTGAAGCAATGGAATACTTGGAGT
 CGAAGCAGTTCCTTCACAGAGACCTGGCAGCTCGAAACTGTTGGTAAACGATCAAGGAGTTGTGAAAGT
 ATCTGACTTTGGCCTGTCTAGGTATGTCCTTGATGATGAGTACACCAGCTCTGTAGGCTCCAAGTTTCCA
 GTCGGTGGTCTCCACCAGAAGTCTTATGTATAGCAAGTTCAGCAGCAAATCTGACATCTGGGCTTTTG
 GGGTTTTAATGTGGGAGATCTACTCCCTGGGGAAGATGCCGTATGAGAGATTTACTAACAGTGAGGCAGC
 AGAACACATTGCTCAAGGCTTACGTCTCTACAGCCTCATCTGGCATCAGAGAGGGTATATACCATCATG
 TACAGTCTGGCACGAGAAAGCAGATGAACGTCTAGTTTCAAATCTCTTGAGTAACATTCTAGATG
 TGATGGATGAAGAATCC

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR209829 protein sequence
Red=Cloning site Green=Tags(s)

MAAVILESIFLKRSQQKKKTSPLNFKKRLFLLVHKL SYEYDFERGRGSKKGSIDVEKITCVETVIPE
 KNPPPERQIPRRGEESSEMEQISIERFPYPFQVVYDEGLYVFSPTTEELRKRWIHQKKNVIRCNSDLVQ
 KYHPCFWIDGQYLCCSQTAKNAMGCQILENRNGLKPGSSHRKTKKPLPPTPEEDQILKKPLPPEPTAAP
 ISTTELKVVVALYDYMPMNANDLQLRKGEEYFILLEESNLPWWRARDKNGQEGYIPSNYITEAEDSIEMYE
 WYSKHMTRSQAELLLKQEGKEGGFIVGDSKAGKYTVSVFAKSTGEPQGVIRHYVVCSTPQSQYYLAEKH
 LFSTIPELINYHQHNSAGLISRLKYPVSKQKNAPSTAGLGYGSWEIDPKDLTFLKELGTGQFGVVKYK
 WRGQYDVAIKMIREGSMSEDEFIEEAKVMMNLSHEKLVQLYGVCTKQRPFIITEYMANGCLLNLYREMR
 HRFQTQQLLEMCKDVCEAMEYLESKQFLHRDLAARNCLVNDQGVVKVSDFGLSRVLDDEYTSVSGSKFP
 VRWSPPEVLMYSKFSKSDIWFAGVLMWEIYSLGKMPYERFTNSEAAEHIAQGLRLYRPHLASERVYTIM
 YSCWHEKADERPSFKILLSNILDVMDEES

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_013482

ORF Size: 1980 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_013482.1](#), [NM_013482.2](#), [NP_038510.1](#)

RefSeq Size: 2535 bp

RefSeq ORF: 1980 bp

Locus ID: 12229

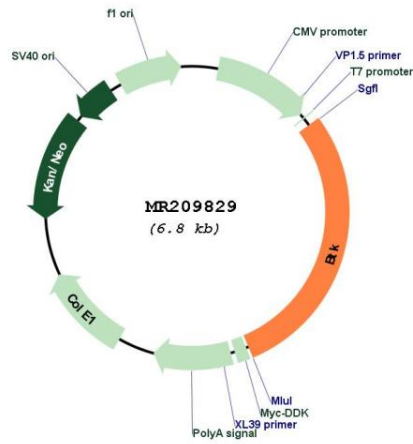
UniProt ID: [P35991](#)

Cytogenetics: X 56.18 cM

MW: 76.2 kDa

Gene Summary: Non-receptor tyrosine kinase indispensable for B lymphocyte development, differentiation and signaling. Binding of antigen to the B-cell antigen receptor (BCR) triggers signaling that ultimately leads to B-cell activation. After BCR engagement and activation at the plasma membrane, phosphorylates PLCG2 at several sites, igniting the downstream signaling pathway through calcium mobilization, followed by activation of the protein kinase C (PKC) family members. PLCG2 phosphorylation is performed in close cooperation with the adapter protein B-cell linker protein BLNK. BTK acts as a platform to bring together a diverse array of signaling proteins and is implicated in cytokine receptor signaling pathways. Plays an important role in the function of immune cells of innate as well as adaptive immunity, as a component of the Toll-like receptors (TLR) pathway. The TLR pathway acts as a primary surveillance system for the detection of pathogens and are crucial to the activation of host defense. Especially, is a critical molecule in regulating TLR9 activation in splenic B-cells. Within the TLR pathway, induces tyrosine phosphorylation of TIRAP which leads to TIRAP degradation. BTK plays also a critical role in transcription regulation. Induces the activity of NF-kappa-B, which is involved in regulating the expression of hundreds of genes. BTK is involved on the signaling pathway linking TLR8 and TLR9 to NF-kappa-B. Transiently phosphorylates transcription factor GTF2I on tyrosine residues in response to BCR. GTF2I then translocates to the nucleus to bind regulatory enhancer elements to modulate gene expression. ARID3A and NFAT are other transcriptional target of BTK. BTK is required for the formation of functional ARID3A DNA-binding complexes. There is however no evidence that BTK itself binds directly to DNA. BTK has a dual role in the regulation of apoptosis. [UniProtKB/Swiss-Prot Function]

Product images:



Circular map for MR209829